

Minimum Spanning Tree Cheatsheet

Use this algorithm when:

- You are trying to find the minimum sum of weights needed to connect things together
- You are trying to minimize the maximum edge weight needed to connect things together

Steps to using the algorithm:

Thinking about the problem:

- 1) Figure out nodes and edges
- 2) Decide which algorithm to use
 - If N^2 is close to M , use the $O(N^2)$ algorithm
 - If you have to find the minimum cost to only connect x nodes together, use Kruskal's (Union Find)
 - If you cannot store all the edges, use Prim's
 - Otherwise, it doesn't matter

How to calculate the runtime:

$O(N^2)$ -or- $O(M \log N)$